

Title: Baxter Infusion Pump	<b>Disclaimer: This procedure provided "as is" and with possible faults. User must verify before use. Neither provider nor website assumes any responsibility for its use.</b>
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File = Flo-Gard3 .com

1. General  
Applies to the Baxter Flo-Gard Infusion Pump
2. Reference Documents: Flo-Gard 6201 Service Manual
3. Tools / Fixtures / Labels  
Safety Testor: Dale 601  
Buret or scale (preferred)
4. Initial Inspection  
Clean unit as required. Common problems are internal breakage due to dropping.
5. Mechanical and Electrical Safety Inspection
  - 5.1. Door movement – opens up slightly passed 90 deg. The latch should not swing past horizontal. Check the small round nylon cover on the latch pin.
  - 5.2. Check Pole Clamp (allen nut, rubber surface)
  - 5.3. Label Integrity
  - 5.4. Line Cord Integrity (< .500 ohms)
  - 5.5. Equipment Frame Leakage ( < 300 uA)

Note: For remainder of this procedure, run unit unplugged to check battery quality.

6. Basic PM Procedure
  - 6.1. Check date date/time and update if necessary using check config initiated by simultaneously pressing the rear switch button, On/Off, and Stop. Hitting “Clear Tot Vol” button cycles thru all the options.
  - 6.2. Other Configuration Checks: Using above configuration mode:
    - Check software revision level for 1.10 or better (using <Silence><On-Off>).
    - All parameters are default per the 6201 service manual except “Insert Clamp” → Alarm
  - 6.3. Open/Close the Door to give corresponding display alert.
  - 6.4. Simultaneous Flow, Volume and Secondary to Primary Transition Test:  
Set Pri Rate = 375, Pri Vol = 5, Sec Rate 250, Sec Volume = 5.  
Set burette to a known starting level; press Sec Start which should start a 2 stage delivery of 10 ml total. Open door while running to temporarily cause a stop/alarm.
  - 6.5. Accept 9.5 - 10.5 mL (See Appendix); total elapsed time = 2 min
  - 6.6. Upper Occlusion Check – run unit at 100 – 200 ml/min and pinch hose upstream.  
Note alarm “Upstream Occlusion”.



- 6.7. Lower Occlusion Check – switch the pressure gage into the output circuit and occlude. Run unit at 100 ml/min and note pressure (assuming Occlusion level has been set to 1.) Display will soon read “Occlusion”. The acceptable pressure is 6- 9 psi.
- 6.8. Air-In-Line Detection - To save time, set Pri Flow to 500 and volume = 5-10mL. Tip the air trap in the upstream line to form at least 1 bubble  $\frac{3}{4}$ " long or less. Alarm soon will occur as “AIR”. Press “Pri Start”.
- 6.9. Re-label: Replace old PM label with dated and initialized green. Protect by applying clear cover label.
- 6.10. Close work order and then enter performance data..

## APPENDIX (Troubleshooting/Adjustments)

### OCCLUSION LEVEL ADJUSTMENTS

Turn on unit by holding down <Clear Total Volume>, <1>, <On>

The display will show the following number array:

	Occlusion Values (on left side)	Battery Info (on right side)
UPPER	3242 – 3314 (avg = 3278)	688-714 (Battery charge quality)
LOWER	2967 – 3039 (avg = 3003)	574-737 (Lithium battery)

### CLAMP SENSOR DETECTORS – CLEANING

There are two sensors to clean – one up front, and one in the back which requires opening the unit and cleaning with a Q-tip. When cleaning does not remedy clamp sensor detection, the clamp sensor circuit may need calibration:

Enter diagnostic mode via <Clear Tot Volume>, <1>, <On/Off>

Clamp In < 0.50 volts; Clamp Out > 4.2v

DUAL CHANNEL					SINGLE CHANNEL	
Plug a molex into CNTEST2						
Pin1	2	3	4	Pin5		
Pump 2		Pump 1				
VR803		VR805			TP802	Adj VR802

### SLIDE CLAMP CONNECTOR – 3 WIRE TRANSFER ON 9 PIN CONNECTOR

The last 3 wires (empty slots on new connector) have color sequence gray, brown, purple (end).

VOLUME ACCURACY NOTE: Baxter specs are +/- 3%.

FORCE SENSING FLEX RESISTORS -- Good resistance will range from 140K to 210K. For digital readout, use test mode 2: <Clear Tot Volume>, <2>, <On/Off> Note: With no tubing or even tubing loaded/centered properly, there is no change in resistance when door is closed.

AIR SENSOR DIAGNOSTIC Enter test mode 2 using <Clear Tot Volume>, <2>, <On/Off>.

Pri RateWindow (400-650)	Ignore
Pri Vol Window (400-650)	Ignore

An empty tubing set will give a reading less than 11. A tube with fluid will read 400-650. If dual pump, check both sides.